

REMARKS

The amendment accompanies an RCE. Claims 24-58 are pending, with claims 24 and 49 being amended herein. It is respectfully submitted that all claims are allowable.

Each of the pending claims was finally rejected in view of Inaba et al. (U.S. Patent No. 6,525,403, hereinafter "Inaba"), either alone or in combination with other references. Applicant respectfully traverses these rejections.

Claim 24, as amended herein, specifically recites "forming a masking layer over the isolation region and covering a lower portion of the semiconductor fin; and forming a source region and a drain region in uncovered portions of the semiconductor fin, the source region having a source-substrate junction and the drain region having a drain-substrate junction, the source-substrate junction or drain-substrate junction being higher than the bottom surface of the gate electrode by an amount based on a thickness of the masking layer." Applicant respectfully submits that Inaba does not teach or suggest the limitations of claim 24.

As previously stated, Inaba does not teach how the source or drain could be formed above the bottom surface of the gate electrode. Applicant provided proof of this fact, including the affidavit from Dr. Wang. In response, the final rejection stated that, "no specific or special process is claimed to make the invention unique." As now presented, claim 24 now claims just such a process. In particular, claim 24 requires forming a masking layer to cover a lower portion of the semiconductor fin and forming a source region and a drain region in uncovered portions of the semiconductor fin. With this process, the source-substrate junction or drain-substrate junction will be higher than the bottom surface of the gate electrode by an amount based on a thickness of the masking layer. Such a method is clearly not taught or suggested by Inaba. Therefore, claim 24 is allowable over the references of record.

Claims 25-47 and 58 depend from claim 24 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding new limitations.

Claim 48 specifically recites, "forming a region of material adjacent portions of the semiconductor fin not underlying the gate electrode such that a sidewall of the semiconductor fin extends above an upper surface of the region of material; and doping the sidewall of the semiconductor fin above the region of material." Applicant respectfully submits that the combination of Inaba and Yu (U.S. Patent No. 6,764,884) does not teach or suggest the limitations of claim 48.

Neither Inaba nor Yu teach doping a sidewall of the semiconductor fin above a region of material. The final rejection admits that Inaba does not teach the limitation. Further, Yu does not teach such a limitation. At column 6, line 24, Yu teaches that the source/drain regions 220 and 230 can be doped. The Office Action has not shown, nor can Applicant find, any place that teaches or suggests that the doping is performed above any region of material. Since neither reference alone teaches the claimed limitation, the combination of references cannot teach the claimed limitation. Therefore, it is respectfully submitted that claim 48 is allowable over the references of record.


Claims 49-57 depend from claim 48 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding new limitations.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Ira S. Matsil, Applicant's attorney, at 972-732-1001 so

that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge Deposit Account No. 50-1065.

Respectfully submitted,

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Date


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